

Listing of Claims/Amendments to the Claims:

The listing of claims that follows will replace all prior versions in the application.

1. (Previously Presented) A method for detecting failure of an air consumer circuit in a compressed air system, comprising the steps of measuring a variable of state in a compressed air consumer circuit, comparing at least one of said variable of state and a negative gradient of said variable of state against a respective threshold value, and when at least one of said variable of state and said negative gradient of said variable of state satisfies a preselected circuit-failure criterion, shutting off said compressed air consumer circuit.
2. (Previously Presented) The method according to claim 1, wherein said preselected circuit-failure criterion is satisfied when at least one of said variable of state and said negative gradient of said variable of state is below said respective threshold value for a time at least one of equal to and greater than a time of at least one of a dynamic change of said variable of state and a dynamic collapse of said variable of state.
3. (Previously Presented) The method according to claim 1, wherein said threshold value for said variable of state corresponds to a value of said variable of state to be adjusted in said compressed air consumer circuit.
4. (Previously Presented) A detection system for detecting failure of a compressed air consumer circuit in a compressed air system including a compressed air supply part having a compressor, a consumer part having a plurality of compressed air consumer circuits, and electrically actuatable valves for supplying compressed air to said compressed air consumer circuits, the detection system comprising sensors for monitoring pressure in said compressed air consumer circuits, an electronic control unit for evaluating electrical signals from

said sensors and for controlling said electrically actuatable valves, said electrically actuatable valves associated with said compressed air consumer circuits being open, said control unit being adapted to compare at least one of a variable of state in individual ones of said compressed air consumer circuits and a negative gradient of said variable of state against a respective threshold to identify failed ones of said compressed air consumer circuits and to switch ones of said electrically actuated valves associated with said failed ones of said compressed air consumer circuits to a closed state to shut off said failed ones of said compressed air consumer circuits when at least one of said variable of state and negative gradient thereof satisfy a preselected circuit-failure criterion.

5. (Previously Presented) The system according to claim 4, wherein said preselected circuit-failure criterion is satisfied when at least one of said variable of state and said negative gradient is below said respective threshold value for a time at least one of equal to and greater than a time of at least one of a dynamic change of said variable of state and a dynamic collapse of said variable of state.

6. (Previously Presented) The system according to claim 4, wherein said threshold value for said variable of state corresponds to a value of said variable of state to be adjusted in said failed ones of said compressed air consumer circuits.

7. (Previously Presented) The system according to claim 4, wherein said electrically actuatable valves are solenoid valves.

8. (Previously Presented) The method according to claim 1, wherein said variable of state is at least one of pressure, air flow rate, air mass and energy of said compressed air consumer circuit.

9. (Previously Presented) The system according to claim 4, wherein said variable of state is at least one of pressure, air flow rate, air mass and energy of said compressed air consumer circuits.